REMARKS

Claim Status

Claims 1 - 12 are pending in the present application. No additional claims fee is believed to be due.

Rejection Under 35 USC §112, First Paragraph

The Office states that claims 10-12 are rejected under 35 U.S.C. § 112 first paragraph for failing to enable the claimed subject matter. Specifically, the Office references the competing interest between the increase in loop integrity with the decrease in available fibers for engagement with hooks of an engaging component. The Office asks, "[w]hy are the bonded fibers unavailable for engagement?"

The Applicant respectfully disagrees with the Office Action and asserts that claims 10-12 are fully enabled. The application defines a "loop" as "the fiber portions available for engaging with a hook member." (application, page 2, lines 15-16). The application further states that "[a]t 100% bond coverage... each fiber would be anchored to avoid pulling away from the web, but there would be no fibers available for hook engagement." (application, page 2, lines 30-32). At 100% bond coverage every portion of every fiber would be anchored to an adjacent fiber or adjacent layer such that no loops would be available for engaging with a hook member.

In the Office Action dated March 11, 2005, the Office stated:

> It is not understood why there wouldn't be any fibers for hook engagement? The hook element of the hook and loop fastener is an open hook that engages the loop of the loop element whether that loop is bonded to a backing layer or is hanging free from the backing layer. Either way, the hook can engage the loop, Please clarify.

(Office Action dated March 11, 2005, page 2).

However, King et al. teaches that "[w]hen the male component and the loop component are pressed together in a face to face relationship to close the fastening device, the hooks entangle the loops forming a plurality of mechanic bonds between the individual hooks and loops." (col. 1, lines 37-41). At a point where a fiber is bonded to a backing layer, a hook cannot entangle that point of the fiber. The Office is correct in that

the hook member can engage a loop which is hanging free from the backing layer; however, a loop by definition, cannot be bonded to a backing layer. More specifically, it is not readily apparent to the Applicant how a hook entangles a portion of a fiber which is bonded to a backing layer unless the hook penetrated through the backing layer.

In response to arguments presented by the Applicant previously, the Office states that the notion that fibers being "partially bonded are partially available for engagement... is not disclosed in the original specification." (Office Action, page 2). However, the application states, with regard to Figure 2, "[t]he pattern of intersecting bond lines 110 serve to anchor the constituent fibers of nonwoven web 105 such that they offer more resistance to being pulled out when subjected to the forces of a mating hook element being disengaged." (application, pages 12-13, lines 32-34 and 1). The definition of the term "anchor" as a verb is "[t]o hold fast by or as if by an anchor." (The American Heritage College Dictionary, 4th ed., 2002). "Anchor" as a noun refers to "[a] rigid point of support." (*Id.*). Additionally, the application states that "[a]nchored fibers are fibers having portions bonded, and thus secured within the nonwoven, or to a backing, for example, to provide structural integrity, and yet also having unbonded portions, which are portions available for hook engagement." (application, page 14, lines 12-14). Consequently, as used in the context of the present invention, the bond lines hold fast the constituent fibers at a point of support.

Additionally, the application does not state that the bond lines of the present invention bond the entire length of any given fiber thereby rendering the fiber unavailable for engagement with a hook member. Rather, as discussed above, the bond lines anchor constituent fibers at specific points, e.g. where the bond lines bond a constituent fiber to an adjacent fiber or an adjacent layer, thereby supporting the constituent fibers at the bond lines. Consequently, because the constituent fibers are bonded to adjacent fibers or layers at the bond lines, other unbonded portions of the constituent fibers, i.e. "loops", are available for engagement with hook members.

For the foregoing reasons Applicant asserts that claims 10-12 are fully enabled. Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 10-12 under 35 U.S.C. § 112 first paragraph.

Rejection Under 35 USC §103(a) Over Stumpf

Claims 1-4 and 10-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,687,754 issued to Stumpf, hereafter, "Stumpf". Applicant respectfully traverses the rejection by the Office Action.

It is well settled that In order to establish a prima facie case of obviousness, three requirements must be met. MPEP §2143. First, there must be some suggestion or motivation, either in the cited references or in the knowledge generally available to one ordinarily skilled in the art, to modify the reference. *Id.* Second, there must be some reasonable expectation of success. *Id.* Third, the cited references must teach or suggest all of the claim limitations. *Id.* Additionally, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." MPEP § 2142. Applicants respectfully traverse the rejection by the Office because the Office has failed to factually support its conclusion of obviousness and because there is no motivation to make the suggested modification.

Claims 1 and 10 recite, in part, that "said pattern includes at least 3.2 pattern elements per square centimeter." In its rejection, the Office states:

> Stumpf fails to disclose the specific density of the pattern elements. However, the density of the pattern elements, i.e., the amount of adhesive lines applied to the loop member, is considered a design effect variable. The increase or decrease in the density of the pattern elements results in an expected increase or decrease in the number of fibers being adhered to the loop and results in an increase or decrease in the number of fibers adhere to themselves in Stumpf's final product. It would have been an obvious design choice to increase or decrease the number of pattern elements to increase or decrease the bond strength of Stumpf's final product in order to vary the product for different uses without wasting adhesive.

(Office Action page 3).

Applicant is unclear as to the exact basis upon which the Office relies for its rejection of claims 1-4 and 10-12; therefore, Applicant will address the rejection from two separate positions.

Optimization of ranges:

The claim element of "said pattern includes at least 3.2 pattern elements per square centimeter", which is recited, in part, in claim 1, has not been established as a

result-effective variable. Case law provides that "[a] particular parameter must first be recognized as a result-effective variable, *i.e.* a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." MPEP § 2144.05 II.B. (citing *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)).

The application states that nonwovens having about 3.2 patterns per square centimeter, in part, have been found to "produce excellent reliability when used as a loop fastener. (application, page 14, lines 5-7). The application further states that it is believed that such pattern elements produce "more anchored fibers without a proportional increase in the percentage of overall bonded area." (application, page 14, lines 8-11). Thus, while the 3.2 patterns per square centimeter do produce an increase in the number of fibers anchored, the 3.2 patterns per square centimeter do not produce a proportional increase in the percentage of overall bonded area.

In contrast, Stumpf teaches "an elastic, high-loft nonwoven fabric with a discontinuous backing layer of adhesive and a multiplicity of heat set elements looped outwardly from the backing." (Abstract). As the Office concedes, Stumpf does not teach 3.2 patterns per square centimeter. Additionally, Applicants cannot find any teaching in Stumpf which teaches the importance of the bonded area and/or the importance of anchored fibers. Moreover, the Office provides no evidence that the claim element of "said pattern includes at least 3.2 pattern elements per square centimeter" is a result-effective variable.

Because Stumpf does not recognize the importance of the bonded area and the importance of the anchored fibers, the claim element of "said pattern includes at least 3.2 pattern elements per square centimeter", as recited, in part, in claims 1 and 10, have not been established as result effective variables. Accordingly, Applicants assert that the Office has not established a *prima facie* case of obviousness, because the Office has not factually supported its conclusion of obviousness.

Matter of Design Choice:

The claim element of "said pattern includes at least 3.2 pattern elements per square centimeter", which is recited, in part, in claim 1, is not a mere matter of design choice. Case law provides that "matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art." MPEP § 2144.04 (I) (*citing In re Seid*, 161 F.2d 229, 73, USPQ 431 (CCPA 1947)). However, as stated previously, the application provides that the

introduction of 3.2 pattern elements per square centimeter has associated therewith more anchored fibers without a proportional increase in the percentage of overall bonded area. (application, page 14, lines 10-11). Therefore, the claim element of 3.2 pattern elements per square centimeter is not *de facto* obvious. Consequently, the conclusory statement provided by the Office that the claim element of 3.2 pattern elements per square centimeter is mere design choice and is therefore obvious does not meet the initial burden on the Office for establishing a proper or sufficient rejection based on § 103. Specifically, the Office has not provided any motivation of why one skilled in the art would modify the number of pattern elements of Stumpf.

For the foregoing reasons, Applicants assert that a *prima facie* case of obviousness has not been established against claims 1-4 and 10-12. Accordingly, Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. § 103(a).

Rejection Under 35 USC §103(a) Over Stumpf in view of Romanek

Claims 5-7 have been rejected under 35 U.S.C. § 103(a) as being obvious over Stumpf in view of U.S. Patent No. 4,446,189 issued to Romanek, hereafter, "Romanek". Applicants respectfully traverse the rejection by the Office because there is no motivation to combine the suggested references of Stumpf and Romanek.

First, the claims elements of claim 5 "wherein each bond line in said first plurality of non-intersecting continuous bond lines defines a wave pattern and adjacent bond lines are 180 degrees out of phase" and the claim elements of claim 6 "wherein each bond line in said second plurality of non-intersecting continuous bond lines defines a wave pattern and adjacent bond lines are 180 degrees out of phase" are not *de facto* obvious. In its rejection, the Office states:

> Regarding claims 5 and 6, Stumpf discloses a sinusoidal wave pattern of adhesive in phase with each line (figure 31), but fails to disclose a wave pattern 180 degrees out of phase with each adjacent line.
>
> Romanek discloses a sinusoidal wave pattern of bonding that is 180 degrees out of phase with each adjacent line of bonding (figure 14) and a sinusoidal wave pattern of bonding in phase with each adjacent line of bonding (figure 9). It is concluded that Romanek discloses that either type of wave pattern can be used to attach the webs to each other equally as well as the other.
>
> It would have been an obvious choice in alternative design to use the out-of- phase wave pattern of bonding, as

> taught by Romanek, in place of Stumpf's in-phase wave pattern of bonding for the reasons indicated above.
>
> (Office Action dated March 11, 2005, page 6).

As stated previously, case law provides that "matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art." MPEP § 2144.04 (I) (*citing In re Seid*, 161 F.2d 229, 73, USPQ 431 (CCPA 1947)). However, the application provides that the introduction of non-linear segments has associated therewith more anchored fibers without a proportional increase in the percentage of overall bonded area. (application, page 14, lines 10-11). Because the out of phase bond lines provide functionality, they are not *de facto* obvious. Consequently, the conclusory statement provided by the Office that the out of phase of the bond lines are mere design choice and is therefore obvious does not meet the initial burden on the Office for establishing a proper or sufficient rejection based on § 103. Specifically, the Office has not provided any motivation of why one skilled in the art would modify the bonds of Stumpf with the bonds of Romanek.

Second, even assuming *arguendo* that there was motivation to combine Stumpf and Romanek, the resulting structure does not teach or suggest all of the claim elements of the present invention. Specifically, claim 1 from which claims 5-7 depend, recites, in part, that a loop member for a mechanical fastener comprises "a first plurality of non-intersecting continuous bond lines and a second plurality of non-intersecting continuous bond lines." (emphasis added).

In contrast, Romanek teaches "[a] nonwoven textile fabric laminate comprising at least one layer of nonwoven textile fabric secured by needle punching to an elastic layer." (Abstract). Romanek further teaches that "[t]he needle loom 14 functions to needle punch the superposed layers 58, 60, and 66 of the laminate 70 at a plurality of needle punched locations each spaced a predetermined distance from the next adjacent needle punched location." (col. 3, lines 28-33). Because Romanek teaches a plurality of needle punched locations each being spaced apart by a predetermined distance, the incorporation of the needle punching of Romanek with the patterns taught in Stumpf would not yield the present invention of claim 1. Specifically, the suggested combination of Stumpf and

Romanek does not teach or suggest the claim element of continuous bond lines, as is recited in claim 1.

Because claims 5-7 depend from claim 1, Applicants assert that the suggested combination of Stumpf and Romanek fails to teach or suggest all of the their claim elements. Accordingly, Applicants assert that claims 5-7 are nonobvious over the suggested combination of Stumpf and Romanek. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 5-7 and allowance thereof.

Rejection Under 35 USC §103(a) Over King in view of Stumpf

Claims 1-4 and 8-9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,595,567 issued to King et al., hereafter "King", in view of Stumpf. Applicants respectfully traverse the rejection by the Office because there is no motivation to combine the suggested references.

In its rejection, the Office asserts that King fails to disclose the claim element "wherein said pattern includes at least 3.2 pattern elements per square centimeter." However, the Office asserts that it would have been an obvious matter of design choice to increase or decrease the number of pattern elements to increase or decrease the bond strength of King's final product.

Case law provides that a reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. *See United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966). Moreover, if a reference is found to teach away from a suggested combination, then there is no motivation to make the suggested combination. *See In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988).

Stumpf teaches "an elastic, high-loft nonwoven fabric with a discontinuous backing layer of adhesive and a multiplicity of heat set elements looped outwardly from the backing." (Abstract). Stumpf further teaches that the fibers of the nonwoven fabric are under tension. (col. 4, lines 36-40).

King teaches "[a] loop fastening material having an elastomeric backing joined with a nonwoven web." (Abstract). In contrast to Stumpf though, King further teaches

that "[t]he nonwoven web 30 is preferably positioned on an joined with the backing 34 while the backing 34 is in an elongated orientation and while the filaments 36 are in an untensioned condition." (col. 9, lines 20-23). Additionally, King teaches that it is feasible to position the filaments on the backing 34 "in a tensioned or unstable state, such is not preferred to provide maximum shirring of the filaments 36." (col. 9, lines 24-26).

One skilled in the art, upon reading King would be discouraged from implementing the teachings of Stumpf. Accordingly, Applicants assert that there is no motivation to make the suggested combination between King and Stumpf. Consequently, Applicants assert that a *prima facie* case of obviousness has not been established against claims 1-4 and 8-9. Therefore, Applicant respectfully requests the withdrawal of the rejection of claims 1-4 and 8-9.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 112, first paragraph and § 103(a). Early and favorable action in the case is respectfully requested.

This response represents an earnest effort to place the application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-12 is respectfully requested.

Respectfully submitted,

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